CURRENT STATUS OF ALL CLAIMS

Claims 1 and 2. Cancelled.

3. (Currently amended) A method of identifying ~~an~~ **one or more** ADP-glucose receptor ~~agonist or antagonist~~ **agonists**, comprising:

(a) contacting an ADP-glucose receptor polypeptide with one or more candidate compounds under conditions ~~wherein said receptor produces a~~ **that permit said receptor to produce a** G-protein coupled signal in response to ADP-glucose, wherein said ADP-glucose receptor polypeptide has the amino acid sequence designated SEQ ID NO:2; ~~and~~

(b) **determining the ability of said receptor to increase production of said G-protein coupled signal in response to ADP-glucose, in the presence and absence of said one or more candidate compounds, and**

(c) identifying ~~a candidate compound that alters~~ **one or more candidate compounds that increase** production of said signal, said ~~compound~~ **one or more compounds** being characterized as ~~a ADP-glucose receptor agonist or antagonist~~ **ADP-glucose receptor agonists.**

Claims 4 to 8. Cancelled.

9. (Currently amended) A method of identifying ~~an~~ **one or more** ADP-glucose receptor ~~ligand~~ **ligands**, comprising:

(a) contacting an ADP-glucose receptor polypeptide with one or more candidate compounds under conditions ~~wherein said receptor~~ **that permit said receptor to** selectively ~~binds~~ **bind** ADP-glucose, wherein said ADP-glucose receptor polypeptide has the amino acid sequence designated SEQ ID NO:2; ~~and~~

(b) **determining the ability of said receptor to bind ADP-glucose in the presence and absence of said one or more candidate compounds, and**

(c) identifying ~~a candidate compound that selectively binds~~ **one or more candidate compounds that selectively bind** said ADP-glucose receptor polypeptide, said ~~compound~~ **one or more compounds** being characterized as ~~an~~ ADP-receptor ~~ligand~~ **ligands**.

Claims 10 to 13. Cancelled.

14. (Currently amended) A method of identifying ~~an~~ **one or more** ADP-glucose receptor ~~agonist~~ **agonists** or ~~antagonist~~ **one or more ADP-glucose receptor antagonists**, comprising:

(a) contacting an ADP-glucose receptor polypeptide with one or more candidate compounds in the presence of ADP-glucose under conditions ~~wherein said receptor produces a~~ **that permit said receptor to produce a** G-protein coupled signal in response to ADP-glucose, wherein said ADP-glucose receptor polypeptide has the amino acid sequence designated SEQ ID NO:2; ~~and~~

(b) **determining the ability of said receptor to alter production of said G-protein coupled signal in response to**

ADP-glucose, in the presence and absence of said one or more candidate compounds, and

(c) identifying ~~**a candidate compound that alters**~~ **one or more candidate compounds that alter** production of said signal, said ~~**compound**~~ **one or more compounds** being characterized as **ADP-glucose receptor agonists or antagonists** ~~**a ADP-glucose receptor agonist or antagonist**~~.

Claims 15 to 18. Cancelled.

19. (Currently amended) A method of identifying ~~**an**~~ **one or more** ADP-glucose receptor ~~**ligand**~~ **ligands**, comprising:

(a) contacting an ADP-glucose receptor polypeptide with one or more candidate compounds in the presence of ADP glucose under conditions ~~**wherein said receptor**~~ **that permit said receptor to** selectively ~~**binds**~~ **bind** ADP-glucose, wherein said ADP-glucose receptor polypeptide has the amino acid sequence designated SEQ ID NO:2; ~~**and**~~

(b) **determining the ability of said receptor to bind said ADP-glucose in the presence and absence of said one or more candidate compounds, and**

(c) identifying ~~**a candidate compound**~~ **one or more candidate compounds** that selectively ~~**binds**~~ **bind** said ADP-glucose receptor polypeptide, said ~~**compound**~~ **one or more compounds** being characterized as ~~**an ADP-receptor ligand**~~ **ADP receptor ligands**.

Claims 20 to 45. Cancelled.

46. (Previously added) The method of claim 3, wherein said G-protein coupled signal is increased intracellular calcium ion concentration.

47. (Currently amended) The method of claim 3, wherein said **receptor is contacted with 2 or more different candidate compounds** ~~one or more candidate compounds comprises 100 or more different candidate compounds~~.

48. (Previously added) The method of claim 3, wherein said candidate compound contacts said ADP-glucose receptor polypeptide in the presence of ADP-glucose.

49. (Currently amended) The method of claim 9, wherein said **receptor is contacted with 2 or more different candidate compounds** ~~one or more candidate compounds comprises 100 or more different candidate compounds~~.

50. (Previously added) The method of claim 9, wherein said candidate compound contacts said ADP-glucose receptor polypeptide in the presence of ADP-glucose.

51. (Previously added) The method of claim 14, wherein said G-protein coupled signal is increased intracellular calcium ion concentration.

52. (Currently amended) The method of claim 14, wherein said **receptor is contacted with 2 or more different candidate**

compounds ~~one or more candidate compounds comprises 100 or more different candidate compounds~~.

53. (Currently amended) The method of claim 19, **receptor is contacted with 2 or more different candidate compounds** ~~one or more candidate compounds comprises 100 or more different candidate compounds~~.

54. (New) A method of identifying an ADP-glucose receptor agonist, comprising:

(a) contacting an ADP-glucose receptor polypeptide with a candidate compound under conditions that permit said receptor to produce a G-protein coupled signal in response to ADP-glucose, wherein said ADP-glucose receptor polypeptide has the amino acid sequence designated SEQ ID NO:2;

(b) determining the ability of said receptor to increase production of said G-protein coupled signal in response to ADP-glucose, in the presence or absence of said candidate compound, and

(c) identifying a candidate compound that increases production of said signal, said compound being characterized as an ADP-receptor agonist.

55. (New) The method of claim 54, wherein said receptor is contacted with 100 or more compounds separately.

56. (New) A method of identifying an ADP-glucose receptor ligand, comprising:

(a) contacting an ADP-glucose receptor polypeptide with a candidate compound under conditions that permit said receptor to selectively bind ADP-glucose, wherein said ADP-glucose receptor polypeptide has the amino acid sequence designated SEQ ID NO:2;

(b) determining the ability of said receptor to bind said ADP-glucose in the presence and absence of said candidate compound, and

(c) identifying a candidate compound that selectively binds said ADP-glucose receptor polypeptide, said compound being characterized as an ADP-receptor ligand.

57. (New) The method of claim 56, wherein said receptor is contacted with 100 or more compounds separately.

58. (New) A method of identifying an ADP-glucose receptor agonist or antagonist, comprising:

(a) contacting an ADP-glucose receptor polypeptide with a candidate compound in the presence of ADP-glucose under conditions wherein said receptor produces a G-protein coupled signal in response to ADP-glucose, wherein said ADP-glucose receptor polypeptide has the amino acid sequence designated SEQ ID NO:2;

(b) determining the ability of said receptor to alter production of said G-protein coupled signal in response to ADP-glucose, in the presence and absence of said candidate compound, and

(c) identifying a candidate compound that alters production of said signal, said compound being characterized as an ADP-receptor agonist or antagonist.

59. (New) The method of claim 58, wherein said receptor is contacted with 100 or more compounds separately.

60. (New) A method of identifying an ADP-glucose receptor ligand, comprising:

(a) contacting an ADP-glucose receptor polypeptide with a candidate compound in the presence of ADP glucose under conditions wherein said receptor selectively binds ADP-glucose, wherein said ADP-glucose receptor polypeptide has the amino acid sequence designated SEQ ID NO:2;

(b) determining the ability of said receptor to bind said ADP-glucose in the presence or absence of said candidate compound, and

(c) identifying a candidate compound that selectively binds said ADP-glucose receptor polypeptide, said compound being characterized as an ADP-receptor ligand.

61. (New) The method of claim 60, wherein said receptor is contacted with 100 or more compounds separately.

62. (New) The method of claim 14, wherein said method is practiced to identify one or more ADP-glucose receptor antagonists.

63. (New) The method of claim 58, wherein said method is practiced to identify an ADP-glucose receptor antagonist.